

**Calculus Warm Up #7-1**

1. Use the Quotient rule to find  $f'$ , simplify.

$$f(x) = \frac{\sqrt{3x+2}}{4x^3}$$

Two volunteers to the board!!!

- 1) Show factoring out GCF from numerator to simplify.
- 2) Show combine fractions using LCD to simplify.

This week:

**Today:** Review and practice

**Tuesday:** 4.7 Optimization, (no HW Quiz)

**Wednesday:** Group quiz on graph sketch by hand and finding all extrema, points of inflection and concavity for a function.

**Thursday:** 4.9 Differentials

**Friday:** Review

Chapter 4 Test: Tuesday, Oct. 24

Today's Review and Practice:

- 1) Go over the Salmon WS in your group. Ten minutes. Further questions will be answered tomorrow then you will turn it in.
- 2) Classwork: (Blue) Sketch Snipits  $f$ ,  $f'$ ,  $f''$
- 3) 4.6 Graph Sketching by hand

## 4.6 Summary of Curve Sketching

Find:

domain and range

intercepts

asymptotes

symmetry (section 1.3)

points of discontinuity (gaps, holes, vert. asymptotes)

other points of non-differentiability (pointy places)

Find  $f'(x)$  and  $f''(x)$  and critical #'s to determine test intervals.

Test for extrema and points of inflection, intervals where function is decreasing/increasing, and concavity.

Accurately sketch and label the graph.

You can use a table to organize the information:

Places of interest and intervals between	test #'s on the interval	$f'(x)$ + , - or 0	$f''(x)$ + , - or 0	Conclusion

HW:

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\* Be thorough in your investigation of the function and accurately graph it on graph paper!

This assignment is due turned in tomorrow.